

RJ LeeGroup, Inc.

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The Materials Characterization Specialists

ANALYSIS OF SUMMER 2000 AIR SAMPLES FROM THE EXPORT PLANT, LIBBY MONTANA

In the Matter of
General Consulting

September 27, 2000
Project No. LSH002397

Prepared by

RJ Lee Group, Inc.
350 Hochberg Road
Monroeville, PA 15146

Introduction

Prior to the clean-up at the Export Plant in Libby, MT, ambient air samples were collected along the area perimeter during July, 2000 to serve as pre-remediation background concentrations. Several other ambient samples were collected during the clean-up of the buildings in August 2000. The background samples and six of the "during clean-up" samples were analyzed using the ISO 10312 transmission electron microscopy (TEM) method. The six samples collected during the clean-up were selected for TEM analysis because they reportedly contained the highest phase contrast microscopy fiber concentrations. A figure showing perimeter samples locations is attached.

This report details the results of these analyses.

Sample Information

Table 1 summarizes the sample information for each sample. The sampled air volumes and sample locations were taken from the chain of custody.

Analytical Protocol

ISO 10312 is an international standard TEM method. All samples are prepared for analysis using a direct preparation procedure. During analysis, this method counts structures with an aspect ratio of 5:1. As used in these analyses, the asbestos fibers that were counted were at least 0.5 μm long. Both primary structures and substructures were counted. A substructure is the individual fiber or bundle which physically touch each other to create a larger countable structure (generally a cluster or a matrix particle).

Analytical Data

The data generated from the analyses of these samples are attached in Appendices A (Ambient Background Samples) and B (samples collected during Screening Plant cleaning). Table 2 summarizes the analytical data.

No amphibole asbestos fibers were observed on any of the samples.

Table 1 Information on Samples Analyzed by RJ Lee Group

Location	Date Sampled	Field ID	RJ Lee Group #	Volume, L
Pre-Remediation Background Samples				
Field Blank	7/27/00	1	111987HT	0
Lab Blank	7/27/00	2	111988HT	0
Planer Building – outside north door	7/27/00	3	111989HT	1520.5
Planer Building – outside north door	7/27/00	4	111990HT	1810.6
#4 – SW of Planer building, on perimeter	7/28/00	5	111991HT	1302.8
#5 – S of warehouse building, on perimeter	7/28/00	6	111992HT	1667.0
#1 – N of pole barn, on perimeter	7/28/00	7	111993HT	1676.2
#2 – NW of Planer building, on perimeter	7/28/00	8	111994HT	1597.1
#3 – W of Planer building, on perimeter	7/28/00	9	111995HT	1651.6
#6 – NE of lumber storage building, on perimeter	7/28/00	10	111996HT	1264.0
#7 – NE corner of property on stop sign, Hwy 37	7/28/00	11	111997HT	1278.4
Field Blank, location 2	7/29/00	12	111998HT	0
#1 – N of pole barn, on perimeter	7/29/00	13	111999HT	1382.54
#2 – NW of planer building, on perimeter	7/29/00	14	112000HT	1377.6
#3 – W of planer building, on perimeter	7/29/00	15	112001HT	1269.94
#4 – SW of planer building, on perimeter	7/29/00	16	112002HT	1350.33
Field blank, location 4	7/29/00	17	112003HT	0
#5 – S of warehouse building, on perimeter	7/29/00	18	112004HT	1264.77
#6 – NE of lumber storage building, on perimeter	7/29/00	19	112005HT	1271.66
#7 – NE corner of property, on stop sign, Hwy 37	7/29/00	20	112006HT	1224.64
During Cleaning				
Ambient	8/00	A04-22	113690HT	4907.7
Ambient	8/00	A03-23	113691HT	4995.6
Ambient	8/00	A10-24	113692HT	927.2
Ambient	8/00	A04-25	113693HT	3354.38
Ambient	8/00	PM08-28	113694HT	3135.02
Ambient	8/00	PM07-29	113695HT	2579.82

Table 2 Summary of TEM Amphibole Concentrations, f/ml

Location	Field ID	RJ Lee Group #	Concentration, f/ml
Pre-Remediation Background Samples			
Field Blank	1	111987HT	
Lab Blank	2	111988HT	
Planer Building – outside north door	3	111989HT	< 0.0029
Planer Building – outside north door	4	111990HT	< 0.0025
#4 – SW of Planer building, on perimeter	5	111991HT	< 0.0034
#5 – S of warehouse building, on perimeter	6	111992HT	< 0.0027
#1 – N of pole barn, on perimeter	7	111993HT	< 0.0027
#2 – NW of Planer building, on perimeter	8	111994HT	< 0.0028
#3 – W of Planer building, on perimeter	9	111995HT	< 0.0027
#6 – NE of lumber storage building, on perimeter	10	111996HT	< 0.0035
#7 – NE corner of property on stop sign, Hwy 37	11	111997HT	< 0.0035
Field Blank, location 2	12	111998HT	
#1 – N of pole barn, on perimeter	13	111999HT	< 0.0032
#2 – NW of planer building, on perimeter	14	112000HT	< 0.0032
#3 – W of planer building, on perimeter	15	112001HT	< 0.0035
#4 – SW of planer building, on perimeter	16	112002HT	< 0.0033
Field blank, location 4	17	112003HT	
#5 – S of warehouse building, on perimeter	18	112004HT	< 0.0035
#6 – NE of lumber storage building, on perimeter	19	112005HT	< 0.0035
#7 – NE corner of property, on stop sign, Hwy 37	20	112006HT	< 0.0035
During Cleaning			
Ambient	A04-22	113690HT	< 0.0009
Ambient	A03-23	113691HT	< 0.0009
Ambient	A10-24	113692HT	< 0.0047
Ambient	A04-25	113693HT	< 0.0013
Ambient	PM08-28	113694HT	< 0.0014
Ambient	PM07-29	113695HT	< 0.0017

Appendix A

Pre-Remediation Background Ambient Samples

Sample Date: 7/27/00

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7342 S. MOORE CT. LITTLETON, COLORADO 80127 (303) 932-8484 FAX (303) 932-8585

AIR/BULK CONTAMINANT SAMPLING/CHAIN OF CUSTODY FORM

SAMPLES SUBMITTED TO:	ANALYSIS REQUESTED:
URS Radian	AIR <input checked="" type="checkbox"/> BULK <input type="checkbox"/> OTHER <input type="checkbox"/>
	NIOSH 7400 Method, A Counting Rules <input type="checkbox"/>
	Polarized Light Microscopy <input type="checkbox"/>
	Other Analysis <input checked="" type="checkbox"/> TEM ISO 10312
	Turnaround Time 2 hr. <input type="checkbox"/> 24 hr. <input type="checkbox"/> 3-5 day <input checked="" type="checkbox"/>

Special Instructions: Analyze TEM ISO 10312
FAX results to (406) 293-3745

KEH SAMPLE #

Volume (Liters)

1. Field blank	Sample # 1	—
2. Laboratory blank	Sample # 2	—
3. Ploner Bldg. - outside N. Deer	Sample # 3	1520.5
4. Ploner Bldg. - outside N. Deer	Sample # 4	1810.6
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

Valerie Wimmer 8/1/00
Relinquished by Date

Robert Beltr 8/3/00
Received By Date

Relinquished by Date Received By Date

Sample Date: 7/28/00

KOCH ENVIRONMENTAL HEALTH, INC.

7342 S. MOORE CT. LITTLETON, COLORADO 80127 (303) 932-8484 FAX (303) 932-8585

AIR/BULK CONTAMINANT SAMPLING/CHAIN OF CUSTODY FORM

SAMPLES SUBMITTED TO:	ANALYSIS REQUESTED:
URS Radon	AIR <input checked="" type="checkbox"/> BULK <input type="checkbox"/> OTHER <input type="checkbox"/>
	NIOSH 7400 Method, A Counting Rules <input type="checkbox"/>
	Polarized Light Microscopy <input type="checkbox"/>
	Other Analysis <input checked="" type="checkbox"/> TEM ISO 10312
	Turnaround Time 2 hr. <input type="checkbox"/> 24 hr. <input type="checkbox"/> 3-5 day <input checked="" type="checkbox"/>

Special Instructions: Analyze TEM ISO 10312
For results to (406) 293-3745

KEH SAMPLE #

Volume (Liters)

01. 5 - Location #4 - Southwest of Planer Building - on perimeter	1302.8
02. 6 - Location #5 - South of Warehouse building - on perimeter	1677.0
03. 7 - Location #1 - North of Bk Barn - on perimeter	1676.2
04. 8 - Location #2 - Northwest of Planer building - on perimeter	1597.1
05. 9 - Location #3 - West of Planer building - on perimeter	1651.6
06. 10 - Location #6 - NE of Lumber storage building - on perimeter	1264.0
07. 11 - Location #7 - NE corner of property - on stop sign - Aug 37	1278.1
8. 08	
9.	
10.	
11.	
12.	
13.	
14.	
15.	

Robert Balch 8/1/00
Relinquished by Date

Robert Balch 8/3/00
Received By Date

Relinquished by

Date

Received By

Date

Sample Date: 7/29/00

KOCH ENVIRONMENTAL HEALTH, INC.

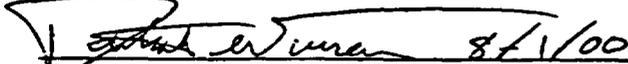
7342 S. MOORE CT. LITTLETON, COLORADO 80127 (303) 932-8484 FAX (303) 932-8585

AIR/BULK CONTAMINANT SAMPLING/CHAIN OF CUSTODY FORM

SAMPLES SUBMITTED TO:	ANALYSIS REQUESTED:
URS Radian	AIR <input checked="" type="checkbox"/> BULK <input type="checkbox"/> OTHER <input type="checkbox"/>
	NIOSH 7400 Method, A Counting Rules <input type="checkbox"/>
	Polarized Light Microscopy <input type="checkbox"/>
	Other Analysis <input checked="" type="checkbox"/> TEM ISO 10312
	Turnaround Time 2 hr. <input type="checkbox"/> 24 hr. <input type="checkbox"/> 3-5 day <input checked="" type="checkbox"/>

Special Instructions: Analyze TEM ISO 10312
FAX results to (466) 293-3745

KEH SAMPLE #	Volume (Liters)
1. 12- Location #2 - Field Blank	—
2. 13- Location #1 - North of Pole Barn - on perimeter	1382.54
3. 14- Location #2 - Northwest of Plauer Bldg - on perimeter	1377.6
4. 15- Location #3 - West of Planer Bldg - on perimeter	1269.94
5. 16- Location #4 - S.W. of Planer Bldg - on perimeter	1350.33
6. 17- Location #4 - Field Blank	—
7. 18- Location #5 - South of warehouse bldg - on perimeter	1264.77
8. 19- Location #6 - NE of lumber storage bldg - on perimeter	1271.66
9. 20- Location #7 - NE corner of property - on stop sign - Hwy 37	1224.64
10. _____	_____
11. _____	_____
12. _____	_____
13. _____	_____
14. _____	_____
15. _____	_____

 8/1/00  8/3/00
 Relinquished by _____ Date _____ Received By _____ Date _____

Relinquished by _____ Date _____ Received By _____ Date _____

KOCH ENVIRONMENTAL HEALTH, INC. AIR CONTAMINANT SAMPLING FORM

DATE: 7/27/00	CLIENT: URS Kadian	PROJECT CONTACT: Tim Gish	PROJECT LOCATION: WR Garco Abrasive Plant, Libby, MT	SAMPLING REP: MARK EMER	
PROJECT #: 21001-001		WORK AREA: Plant wide		ANALYSIS BY:	
SAMPLE TYPE: Asbestos <input type="checkbox"/> (NIOSH 7400) Lead <input type="checkbox"/> (NIOSH 7082) Other <input checked="" type="checkbox"/> TEM Method: _____	PUMP CALIBRATION: Rotameter <input type="checkbox"/> ID _____ Other: DC Lite Dry Cal	FILTER TYPE: ___ 0.8 um 25 mm MCE ___ charcoal tubes ___ Silica Gel Other _____	TEM FILTER: <input checked="" type="checkbox"/> MCE <0.45um 25mm ___ PC <0.45um 37mm MR. _____ Lot No. _____	FILTER FCA: ___ 385 mm ² ___ mm ² ___ NA	MICROSCOPE FIELD AREA: ___ 0.00785 mm ² ___ mm ² ___ NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK)			FLOW RATE (L/MIN)			AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION	
				Start	Stop	Total	Start	Stop	Avg.				___ F/cc	___ other
1	Field Blank	—	Pre Cleaning	—	—	—	—	—	—	—				
2	Field Blank	—		—	—	—	—	—	—	—				
3	OWA	Plaster Bldg. outside North Door	↓	9:18	12:41	209	7.27	7.28	7.275	1520.5				
4	OWA		↓	12:48	4:54	246	7.28	7.43	7.36	1810.6				
Blind Recount														

Key:	Sample Type: P = Personal Ex = Excursion IWA = Inside Work Area OWA = Outside Work Area	Activity: BAK = Background A = Ambient Air HEX = HEPA Exhaust CL = Clearance Sample	Activity: PREP = Work Area Preparation REM = Removal GB = Glovebag FC = Final Cleaning	Activity: BO = Bagout TD = Tear Down PP = Paint Prep
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KOCH ENVIRONMENTAL HEALTH, INC. AIR CONTAMINANT SAMPLING FORM

DATE: 7/28/00		CLIENT: URS Radion		PROJECT CONTACT: Tim Gish		PROJECT LOCATION: UR Glass Vermiculite Plant, Libby, MT			SAMPLING REP: MARK Emter						
PROJECT #: 21001-001		PUMP CALIBRATION: Rotameter <input type="checkbox"/> ID: _____ Other: DC Lite Dry Cal		FILTER TYPE: 0.8 um 25 mm MCE charcoal tubes _____ Silica Gel _____ Other: _____		TEM FILTER: X MCE <0.45um 25mm PC <0.45um 37mm _____ Mfr. _____ Lot No. _____			FILTER FCA: _____ 385 mm² _____ mm ² _____ NA		MICROSCOPE FIELD AREA: _____ 0.00785 mm² _____ mm ² _____ NA				
SAMPLE TYPE: Asbestos <input type="checkbox"/> (NIOSH 7400) Lead <input type="checkbox"/> (NIOSH 7082) Other: TEM Method: _____		SAMPLE DESCRIPTION, LOCATION		ACTIVITY	TIME (24 HOUR CLOCK)			FLOW RATE (L/MIN)			AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/PER FIELD	CONCENTRATION ____ F/cc ____ other ____ ppm ____ mg/M ³	
SAMPLE NUMBER/PUMP NUMBER	SAMPLE TYPE														
Field Blank															
Field Blank															
5	BAK	Location #4 - SW of Planer Bldg - on perimeter	-	10 ²⁵	143	198	6.66	6.50	6.58	1302.8					
5A		↓		10 ²⁵	143	198	6.45	6.30	6.38	1262.3					
6		Location #5 - south of Warehouse Bldg. - on perimeter		9 ⁰⁵	12 ¹³	188	8.96	8.88	8.92	1677.0					
6A		↓		9 ⁰⁵	12 ¹³	188	9.92	9.78	9.85	1851.8					
7		Location #1 - North of Pole Barn - on perimeter		9 ²⁰	12 ¹⁷	177	9.60	9.34	9.47	1676.2					
7A		↓		9 ²⁰	12 ¹⁷	177	9.91	9.67	9.79	1732.8					
8		Location #2 - NW of Planer Bldg. - on perimeter		9 ³⁰	12 ²¹	171	9.37	9.31	9.34	1597.1					
8A	↓	↓		9 ³⁰	12 ²¹	171	9.91	9.85	9.88	1689.5					
Blind Recount															

Key:					
Sample Type:		Activity:			
P = Personal	BAK = Background	PREP = Work Area Preparation	BO = Bagout		
Ex = Excursion	A = Ambient Air	REM = Removal	TD = Tear Down		
IWA = Inside Work Area	HEX = HEPA Exhaust	GB = Glovebag	PP = Paint Prep		
OWA = Outside Work Area	CL = Clearance Sample	FC = Final Cleaning			

KOCH ENVIRONMENTAL HEALTH, INC. AIR CONTAMINANT SAMPLING FORM

DATE: <u>7/28/00</u>		CLIENT: <u>URS Radion</u>		PROJECT CONTACT: <u>Tim Gish</u>		PROJECT LOCATION: <u>WR Grace Vermiculite Plant, Libby, MT</u>		SAMPLING REP: <u>MARK Enter</u>						
PROJECT #: <u>21001-001</u>		PUMP CALIBRATION: <u>Rotameter</u> ID: <u>DC Lite</u> Other: <u>Dry Cal</u>		FILTER TYPE: <u>0.8 um 25 mm MCE</u> <u>charcoal tubes</u> <u>Silica Gel</u> Other: _____		TEM FILTER: <u>X MCE <0.45um 25mm</u> <u>PC <0.45um 37mm</u> Mfr. _____ Lot No. _____		ANALYSIS BY: _____						
SAMPLE TYPE: Asbestos <input type="checkbox"/> (NIOSH 7400) Lead <input type="checkbox"/> (NIOSH 7082) Other <input checked="" type="checkbox"/> <u>TEM</u> Method: _____		FILTER FCA: <u>385 mm²</u> <u>mm²</u> <u>NA</u>		MICROSCOPE FIELD AREA: <u>0.00785 mm²</u> <u>mm²</u> <u>NA</u>										
SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK)			FLOW RATE (L/MIN)			AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION	
				Start	Stop	Total	Start	Stop	Avg.				F/cc	other
	Field Blank													
	Field Blank													
9	BAK	Location #3 - west of Planer Bldg. on perimeter	-	9 ³⁸	12 ²⁵	167	9.91	9.86	9.89	1651.6				
9A		↓	-	9 ³⁸	12 ²⁵	167	9.03	9.00	9.02	1506.3				
10		Location #6 - NE of lumber storage Bldg. on perimeter	-	10 ¹⁰	1 ¹²	182	7.16	6.73	6.95	1264.0				
10A		↓	-	10 ¹⁰	1 ¹²	182	7.15	6.71	6.93	1261.3				
11		Location #7 - NE corner of property on Strip Sign - Hwy 31	-	10 ⁰⁰	1 ⁰⁵	185	7.02	6.79	6.91	1278.4				
11A	↓	↓	-	10 ⁰⁰	1 ⁰⁵	185	6.96	6.75	6.86	1269.1				
Blind Recount														

Key:				
Sample Type:	P = Personal	BAK = Background	Activity:	PREP = Work Area Preparation
	Ex = Excursion	A = Ambient Air		BO = Bagout
	IWA = Inside Work Area	HEX = HEPA Exhaust		TD = Tear Down
	OWA = Outside Work Area	CL = Clearance Sample		PP = Paint Prep
				FC = Final Cleaning

KOCH ENVIRONMENTAL HEALTH, INC. AIR CONTAMINANT SAMPLING FORM

DATE: <u>7/29/00</u>		CLIENT: <u>URS Radian</u>		PROJECT CONTACT: <u>Tim Gishi</u>		PROJECT LOCATION: <u>Wh. Grove Usamicrete Plant, Libby, MT</u>		SAMPLING REP: <u>PATRICK MCGURRIN</u>	
PROJECT #: <u>21001-001</u>		PUMP CALIBRATION: <u>Dry Cal</u>		FILTER TYPE: <u>0.8 um 25 mm MCE</u>		TEM FILTER: <u>X MCE <0.45um 25mm</u>		FILTER FCA: <u>385 mm²</u>	
SAMPLE TYPE: <u>TEM</u>		Rotameter <input type="checkbox"/>		<u>charcoal tubes</u>		<u>PC <0.45um 37mm</u>		MICROSCOPE FIELD AREA: <u>0.00785 mm²</u>	
Lead <input type="checkbox"/> (NIOSH 7082)		ID _____		<u>Silica Gel</u>		MR. _____		<u>NA</u>	
Other <u>TEM</u>		Other: <u>DC Lite</u>		Other _____		Lot No. _____		<u>NA</u>	
Method: _____		Dry Cal		Other _____		Lot No. _____		<u>NA</u>	

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK)			FLOW RATE (L/MIN)			AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/PER FIELD	CONCENTRATION	
				Start	Stop	Total	Start	Stop	Avg.				F/cc	other
<u>12</u>	<u>Field Blank</u>	<u>Location #2</u>												
<u>12A</u>	<u>Field Blank</u>	<u>Location #7</u>												
<u>13</u>	<u>BAK</u>	<u>Location #1 - North of Pole Bldg on perimeter</u>	<u>-</u>	<u>10:02</u>	<u>12:29</u>	<u>147</u>	<u>9.19</u>	<u>9.62</u>	<u>9.41</u>	<u>1382.54</u>				
<u>13A</u>		<u>↓</u>	<u>-</u>	<u>10:02</u>	<u>12:29</u>	<u>147</u>	<u>9.41</u>	<u>9.52</u>	<u>9.47</u>	<u>1391.36</u>				
<u>14</u>		<u>Location #2 - Northwest of Planner bldg on perimeter</u>	<u>-</u>	<u>10:11</u>	<u>1:36</u>	<u>205</u>	<u>6.78</u>	<u>6.65</u>	<u>6.72</u>	<u>1377.6</u>				
<u>14A</u>		<u>↓</u>	<u>-</u>	<u>10:11</u>	<u>1:36</u>	<u>205</u>	<u>6.11</u>	<u>6.03</u>	<u>6.07</u>	<u>1244.35</u>				
<u>15</u>		<u>Location #3 - West of Planner building on perimeter</u>	<u>-</u>	<u>10:17</u>	<u>1:25</u>	<u>188</u>	<u>6.79</u>	<u>6.72</u>	<u>6.76</u>	<u>1269.94</u>				
<u>15A</u>		<u>↓</u>	<u>-</u>	<u>10:17</u>	<u>1:25</u>	<u>188</u>	<u>7.06</u>	<u>7.03</u>	<u>7.05</u>	<u>1324.46</u>				
<u>16</u>		<u>Location #4 - SW of planner building on perimeter</u>	<u>-</u>	<u>10:38</u>	<u>12:56</u>	<u>138</u>	<u>9.87</u>	<u>9.70</u>	<u>9.79</u>	<u>1350.33</u>				
<u>16A</u>		<u>↓</u>	<u>-</u>	<u>10:38</u>	<u>12:56</u>	<u>138</u>	<u>8.90</u>	<u>8.65</u>	<u>8.78</u>	<u>1210.95</u>				
<u>Blind Recount</u>														

Key:	Sample Type: P = Personal	BAK = Background	Activity: PREP = Work Area Preparation	BO = Bagout
	Ex = Excursion	A = Ambient Air	REM = Removal	TD = Tear Down
	IWA = Inside Work Area	HEX = HEPA Exhaust	GB = Glovebag	PP = Paint Prep
	OWA = Outside Work Area	CL = Clearance Sample	FC = Final Cleaning	

KOCH ENVIRONMENTAL HEALTH, INC. AIR CONTAMINANT SAMPLING FORM

DATE: 7/29/00	CLIENT: URS Radian PROJECT #: Z1001-001	PROJECT CONTACT: Tim Gish	PROJECT LOCATION: WR Grace Vermiculite Plant, Lbby, MT WORK AREA: Plant Wide	SAMPLING REP: PATRICK McGUIRE ANALYSIS BY:	
SAMPLE TYPE: Asbestos <input type="checkbox"/> (NIOSH 7400) Lead <input type="checkbox"/> (NIOSH 7082) Other: <u>TEM</u> Method: _____	PUMP CALIBRATION: Kotometer <input type="checkbox"/> ID _____ Other: <u>DC Lite</u> <u>Dry Cell</u>	FILTER TYPE: <input type="checkbox"/> 0.8 um 25 mm MCE <input type="checkbox"/> charcoal tubes <input type="checkbox"/> Silica Gel Other _____	TEM FILTER: <input checked="" type="checkbox"/> MCE <0.45um 25mm <input type="checkbox"/> PC <0.45um 37mm Mfr. _____ Lot No. _____	FILTER FCA: <input type="checkbox"/> 385 mm ² <input type="checkbox"/> mm ² <input type="checkbox"/> NA	MICROSCOPE FIELD AREA: <input type="checkbox"/> 0.00785 mm ² <input type="checkbox"/> mm ² <input type="checkbox"/> NA

SAMPLE NUMBER/ PUMP NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION, LOCATION	ACTIVITY	TIME (24 HOUR CLOCK)			FLOW RATE (L/MIN)			AIR VOLUME (L)	DETECT. LIMIT OR LOQ	FIBERS/ PER FIELD	CONCENTRATION	
				Start	Stop	Total	Start	Stop	Avg.				F/cc	other
17	Field Blank	Location #4												
17A	Field Blank	Location #6												
18	BAK	Location #5 - South of warehouse building on perimeter	---	10:51	1:12	141	9.07	8.87	8.97	1264.77				
18A		↓	---	10:51	1:12	141	9.03	8.40	8.97	1264.77				
19		Location #6 - NE of lumber storage building on perimeter	---	11:06	1:20	134	9.31	9.64	9.49	1271.66				
19A		↓	---	11:06	1:20	134	9.31	9.58	9.48	1264.65				
20		Location #7 - NE corner of property - on stop sign Hwy 37	---	11:16	2:14	178	6.88	6.88	6.88	1224.64				
20A		↓	---	11:16	2:14	178	7.28	7.20	7.24	1288.72				
Blind Recount														

Key	Sample Type: P = Personal Ex = Excursion IWA = Inside Work Area OWA = Outside Work Area	BAK = Background A = Ambient Air HEX = HEPA Exhaust CL = Clearance Sample	Activity: PREP = Work Area Preparation REM = Removal GB = Glovebag FC = Final Cleaning	BO = Bagout TD = Tear Down PP = Paint Prep
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Test Report
Asbestos Concentration
Transmission Electron Microscopy ISO Method 10312
Project LAH004417-3

RJ Lee Group Sample Number	Client Sample Number	Filter Area (sq mm)	Volume ‡ (Liters)	Area		Structures		Analytical Sensitivity †		Concentration		Analysis Date
				Analyzed (sq mm)		Chr	Amp	(S/sq. mm)	(S/cc)	(S/sq. mm)	(S/cc)	
0111987HT	1	385	Blank	0.0861	0	0	11.6	-	<11.6*	-	8/8/0	
0111988HT	2	385	Blank	0.0861	0	0	11.6	-	<11.6*	-	8/9/0	
0111989HT	3	385	1520.50	0.0861	0	0	11.6	0.0029	<11.6*	<0.0029*	8/8/0	
0111990HT	4	385	1810.60	0.0861	3	0	11.6	0.0025	34.8	0.0074	8/8/0	
0111991HT	5	385	1302.80	0.0861	0	0	11.6	0.0034	<11.6*	<0.0034*	8/9/0	
0111992HT	6	385	1677.00	0.0861	0	0	11.6	0.0027	<11.6*	<0.0027*	8/9/0	
0111993HT	7	385	1676.20	0.0861	0	0	11.6	0.0027	<11.6*	<0.0027*	8/9/0	
0111994HT	8	385	1597.10	0.0861	0	0	11.6	0.0028	<11.6*	<0.0028*	8/9/0	
0111995HT	9	385	1651.60	0.0861	0	0	11.6	0.0027	<11.6*	<0.0027*	8/9/0	
0111996HT	10	385	1264.00	0.0861	1	0	11.6	0.0035	11.6	0.0035	8/9/0	
0111997HT	11	385	1278.40	0.0861	0	0	11.6	0.0035	<11.6*	<0.0035*	8/9/0	
0111998HT	12	385	Blank	0.0861	0	0	11.6	-	<11.6*	-	8/9/0	
0111999HT	13	385	1382.54	0.0861	0	0	11.6	0.0032	<11.6*	<0.0032*	8/9/0	
0112000HT	14	385	1377.60	0.0861	0	0	11.6	0.0032	<11.6*	<0.0032*	8/9/0	
0112001HT	15	385	1269.94	0.0861	0	0	11.6	0.0035	<11.6*	<0.0035*	8/9/0	
0112002HT	16	385	1350.33	0.0861	0	0	11.6	0.0033	<11.6*	<0.0033*	8/9/0	

‡ Volumes provided by URS Corporation were used to calculate analytical results and sensitivities.

† Analytical sensitivity is the calculated concentration based on one structure in the area analyzed.

Chr - Chrysotile, Amp - Amphibole

Samples received on: Thursday, August 3, 2000

* Results Less Than Analytical Sensitivity.

N/A - Sample not analyzed.

Authorized Signature 
 Kimberly A. Allison, Manager-TEM Analysis

RJ Lee Group, Inc.
 Headquarters

350 Hochberg Road
 Monroeville, PA 15146
 Test Report Page: 1 of 2

Phone (724) 325-1776
 Fax (724) 733-1799

Test Report
Asbestos Concentration
Transmission Electron Microscopy ISO Method 10312
Project LAH004417-3

RJ Lee Group Sample Number	Client Sample Number	Filter Area (sq mm)	Volume ‡ (Liters)	Area	Structures		Analytical Sensitivity †		Concentration		Analysis Date
				Analyzed (sq mm)	Chr	Amp	(S/sq. mm)	(S/cc)	(S/sq. mm)	(S/cc)	
0112003HT	17	385	Blank	0.0861	0	0	11.6	-	<11.6*	-	8/9/0
0112004HT	18	385	1264.77	0.0861	0	0	11.6	0.0035	<11.6*	<0.0035*	8/9/0
0112005HT	19	385	1271.66	0.0861	0	0	11.6	0.0035	<11.6*	<0.0035*	8/9/0
0112006HT	20	385	1224.64	0.0861	0	0	11.6	0.0037	<11.6*	<0.0037*	8/9/0

‡ Volumes provided by URS Corporation were used to calculate analytical results and sensitivities.

† Analytical sensitivity is the calculated concentration based on one structure in the area analyzed.

Chr - Chrysotile, Amp - Amphibole

Samples received on: Thursday, August 3, 2000

* Results Less Than Analytical Sensitivity.

N/A - Sample not analyzed.

Authorized Signature 
 Kimberly A. Allison, Manager-TEM Analysis
 Date Wednesday, September 27, 2000

RJ Lee Group, Inc.
 Headquarters

350 Hochberg Road
 Monroeville, PA 15146
 Test Report Page: 2 of 2

Phone (724) 325-1776
 Fax (724) 733-1799

**RJ Lee Group , Inc
Count Sheet**

Client Name **Radian**
 Project Number **LAH004417-3**
 RJL Sample # **0111987HT**
 Client Sample # **1**
 Microscope **2000 FX**
 Accelerating Volt **120 Kv**
 Magnification **1000 X**
 Analyst **BF**
 EDS Disk

RJL QA Number **HQ18408**
 Grid Openings **10**
 Total Asbestos **0**
 Total Non-Asbestos **0**
 Filter **CE 385 mm²**
 Volume **Blank**
 Grid Opening Area **0.0086 mm²**
 Dilution Factor **1**

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111988HT
Client Sample # 2
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18408
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume Blank
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group, Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111989HT
Client Sample # 3
Microscope 2000 FX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst BF
EDS Disk

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1520.5 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group, Inc
Count Sheet**

Client Name Radian
 Project Number LAH004417-3
 RJL Sample # 0111990HT
 Client Sample # 4
 Microscope 1200 EX
 Accelerating Volt 120 Kv
 Magnification 1000 X
 Analyst RBG
 EDS Disk

RJL QA Number HQ18407
 Grid Openings 10
 Total Asbestos 3
 Total Non-Asbestos 0
 Filter CE 385 mm²
 Volume 1810.6 Liters
 Grid Opening Area 0.0086 mm²
 Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	1	7.50	0.15	Chrysotile	B3			X		MD31 6.0 X 5.5
6	2	4.25	0.15	Chrysotile	B3			X		
6	3	1.25	0.15	Chrysotile	B3			X		
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111991HT
Client Sample # 5
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1302.8 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111992HT
Client Sample # 6
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1677.0 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111993HT
Client Sample # 7
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1676.2 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111994HT
Client Sample # 8
Microscope 1200 EX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1597.1 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111995HT
Client Sample # 9
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1651.6 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111996HT
Client Sample # 10
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 1
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1264.0 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	1	2.60	0.05	Chrysotile				X		
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name **Radian**
 Project Number **LAH004417-3**
 RJL Sample # **0111997HT**
 Client Sample # **11**
 Microscope **100 CX**
 Accelerating Volt **120 Kv**
 Magnification **1000 X**
 Analyst **DHG**
 EDS Disk **1753**

RJL QA Number **HQ18407**
 Grid Openings **10**
 Total Asbestos **0**
 Total Non-Asbestos **0**
 Filter **CE 385 mm²**
 Volume **1278.4 Liters**
 Grid Opening Area **0.0086 mm²**
 Dilution Factor **1**

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group, Inc
Count Sheet**

Client Name **Radian**
 Project Number **LAH004417-3**
 RJL Sample # **0111998HT**
 Client Sample # **12**
 Microscope **1200 EX**
 Accelerating Volt **120 Kv**
 Magnification **1000 X**
 Analyst **RBG**
 EDS Disk

RJL QA Number **HQ18408**
 Grid Openings **10**
 Total Asbestos **0**
 Total Non-Asbestos **0**
 Filter **CE 385 mm²**
 Volume **Blank**
 Grid Opening Area **0.0086 mm²**
 Dilution Factor **1**

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0111999HT
Client Sample # 13
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1382.5 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group, Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0112000HT
Client Sample # 14
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1377.6 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
 Project Number LAH004417-3
 RJL Sample # 0112001HT
 Client Sample # 15
 Microscope 1200 EX
 Accelerating Volt 120 Kv
 Magnification 1000 X
 Analyst RBG
 EDS Disk

RJL QA Number HQ18407
 Grid Openings 10
 Total Asbestos 0
 Total Non-Asbestos 0
 Filter CE 385 mm²
 Volume 1269.9 Liters
 Grid Opening Area 0.0086 mm²
 Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

RJ Lee Group, Inc
Count Sheet

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0112002HT
Client Sample # 16
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1350.3 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0112003HT
Client Sample # 17
Microscope 1200 EX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst RBG
EDS Disk

RJL QA Number HQ18408
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume Blank
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0112004HT
Client Sample # 18
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst DHG
EDS Disk 1753

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1264.8 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

RJ Lee Group, Inc
Count Sheet

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0112005HT
Client Sample # 19
Microscope 1200 EX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst RBG
EDS Disk

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1271.7 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name Radian
Project Number LAH004417-3
RJL Sample # 0112006HT
Client Sample # 20
Microscope 1200 EX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst RBG
EDS Disk

RJL QA Number HQ18407
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 1224.6 Liters
Grid Opening Area 0.0086 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

Appendix B

Selected Perimeter Samples During Cleaning

KOCH ENVIRONMENTAL HEALTH, INC.

7342 S. MOORE CT. LITTLETON, COLORADO 80127 (303) 932-8484 FAX (303) 932-8585

AIR/BULK CONTAMINANT SAMPLING/CHAIN OF CUSTODY FORM

SAMPLES SUBMITTED TO:	ANALYSIS REQUESTED:
EPA	AIR <input checked="" type="checkbox"/> BULK <input type="checkbox"/> OTHER <input type="checkbox"/>
Analyze by: (P)	NIOSH 7400 Method, A Counting Rules <input checked="" type="checkbox"/> (PP)
	Polarized Light Microscopy <input type="checkbox"/>
TEM ISO 10312 Method	Other Analysis <input type="checkbox"/>
	Turnaround Time 2 hr. <input type="checkbox"/> 24 hr. <input type="checkbox"/> 3-5 day <input type="checkbox"/>

Special Instructions: _____

KEH SAMPLE #

Volume (Liters)

1. A04-22	4907.7
2. A03-23	4945.6
3. A10-24	927.2
4. A04-25	3354.38
5. PMOS-28	3135.02
6. PMO7-29	2579.82
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

11. 9/8/00 Please analyze these samples by TEM ISO 10312 Method.
 12. IF you have any questions or comments please call
 13. Peter Pendula or Jim Stout @ 406-293-2864. Request 5-day turnaround.
 14. _____
 15. _____ Stout 9/8/00

Peter Pendula 8/30/00 Jim Stout 8/30/00
 Relinquished by Date Received By Date

Jim Stout 8/30/00 Murray P. Parson 8/30/00
 Relinquished by Date Received By Date

Murray P. Parson 8/31/00 Jim Stout 8/31/00
 Relinquished by date Received by date

Peter Pendula 9/8/00
Rec'd at R9 Lab Shop
Andrea L. Lawrence

Relinquished to: Fed Ex Delivery
 9/11/00 10am

Test Report
Total Asbestos Structure Concentration
ISO 10312 Analysis
Project LAH004417-5

RJ Lee Group Sample Number	Client Sample Number	Filter Area (sq mm)	Volume ‡ (Liters)	Area	Structures		Analytical Sensitivity †		Concentration		Analysis Date
				Analyzed (sq mm)	Chr	Amp	(S/sq. mm)	(S/cc)	(S/sq. mm)	(S/cc)	
0113690HT	A04-22	385	4907.70	0.0881	0	0	11.4	0.0009	<11.4*	<0.0009*	9/12/0
0113691HT	A03-23	385	4995.60	0.0881	0	0	11.4	0.0009	<11.4*	<0.0009*	9/12/0
0113692HT	A10-24	385	927.20	0.0881	0	0	11.4	0.0047	<11.4*	<0.0047*	9/12/0
0113693HT	A04-25	385	3354.38	0.0881	0	0	11.4	0.0013	<11.4*	<0.0013*	9/12/0
0113694HT	PM08-28	385	3135.02	0.0881	0	0	11.4	0.0014	<11.4*	<0.0014*	9/14/0
0113695HT	PM07-29	385	2579.82	0.0881	0	0	11.4	0.0017	<11.4*	<0.0017*	9/13/0

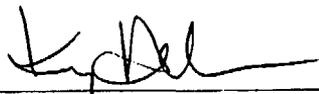
‡ Volumes provided by URS Corporation for Project Libby, MT were used to calculate analytical results and sensitivities.

† Analytical sensitivity is the calculated concentration based on one structure in the area analyzed.

Chr - Chrysotile, Amp - Amphibole

Samples received on: Monday, September 11, 2000

* Results Less Than Analytical Sensitivity.

Authorized Signature 

 Kimberly A. Allison, Manager-TEM Analysis
 Date Date Monday, September 18, 2000

RJ Lee Group, Inc.
Headquarters

350 Hochberg Road
 Monroeville, PA 15146
 Test Report Page: 1 of 1

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**RJ Lee Group , Inc
Count Sheet**

Client Name URS Corporation
Project Number LAH004417-5
RJL Sample # 0113690HT
Client Sample # A04-22
Microscope 100 CX
Accelerating Volt 120 Kv
Magnification 1000 X
Analyst LH
EDS Disk 1753

RJL QA Number HQ18564
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 2
Filter CE 385 mm²
Volume 4907.7 Liters
Grid Opening Area 0.0088 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	1	2.50	0.50	Nonasbestos		X				
4	2	1.50	0.20	Nonasbestos		X				
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

RJ Lee Group, Inc
Count Sheet

Client Name **URS Corporation**
 Project Number **LAH004417-5**
 RJL Sample # **0113691HT**
 Client Sample # **A03-23**
 Microscope **100 CX**
 Accelerating Volt **100 Kv**
 Magnification **19000 X**
 Analyst **LH**
 EDS Disk **1753**

RJL QA Number **HQ18564**
 Grid Openings **10**
 Total Asbestos **0**
 Total Non-Asbestos **1**
 Filter **CE 385 mm²**
 Volume **4995.6 Liters**
 Grid Opening Area **0.0088 mm²**
 Dilution Factor **1**

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	1	8.50	8.00	Nonasbestos	MD10	X				
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group, Inc
Count Sheet**

Client Name **URS Corporation**
 Project Number **LAH004417-5**
 RJL Sample # **0113692HT**
 Client Sample # **A10-24**
 Microscope **2000 FX**
 Accelerating Volt **120 Kv**
 Magnification **21000 X**
 Analyst **BF**
 EDS Disk

RJL QA Number **HQ18564**
 Grid Openings **10**
 Total Asbestos **0**
 Total Non-Asbestos **0**
 Filter **CE 385 mm²**
 Volume **927.2 Liters**
 Grid Opening Area **0.0088 mm²**
 Dilution Factor **1**

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name URS Corporation
Project Number LAH004417-5
RJL Sample # 0113693HT
Client Sample # A04-25
Microscope 100 CX
Accelerating Volt 100 Kv
Magnification 19000 X
Analyst LH
EDS Disk 1753

RJL QA Number HQ18564
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 3354.4 Liters
Grid Opening Area 0.0088 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

**RJ Lee Group , Inc
Count Sheet**

Client Name URS Corporation
Project Number LAH004417-5
RJL Sample # 0113694HT
Client Sample # PM08-28
Microscope 100 CX
Accelerating Volt 100 Kv
Magnification 19000 X
Analyst LH
EDS Disk 1753

RJL QA Number HQ18564
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 3135.0 Liters
Grid Opening Area 0.0088 mm²
Dilution Factor 1

Field	Fiber	Length µm	Width µm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

RJ Lee Group, Inc
Count Sheet

Client Name URS Corporation
Project Number LAH004417-5
RJL Sample # 0113695HT
Client Sample # PM07-29
Microscope 100 CX
Accelerating Volt 100 Kv
Magnification 19000 X
Analyst LH
EDS Disk 1753

RJL QA Number HQ18564
Grid Openings 10
Total Asbestos 0
Total Non-Asbestos 0
Filter CE 385 mm²
Volume 2579.8 Liters
Grid Opening Area 0.0088 mm²
Dilution Factor 1

Field	Fiber	Length μm	Width μm	Structure Type	Morph	EDS	Photo	SAED	Amphibole Type	Comment
1	0			NSD						
2	0			NSD						
3	0			NSD						
4	0			NSD						
5	0			NSD						
6	0			NSD						
7	0			NSD						
8	0			NSD						
9	0			NSD						
10	0			NSD						

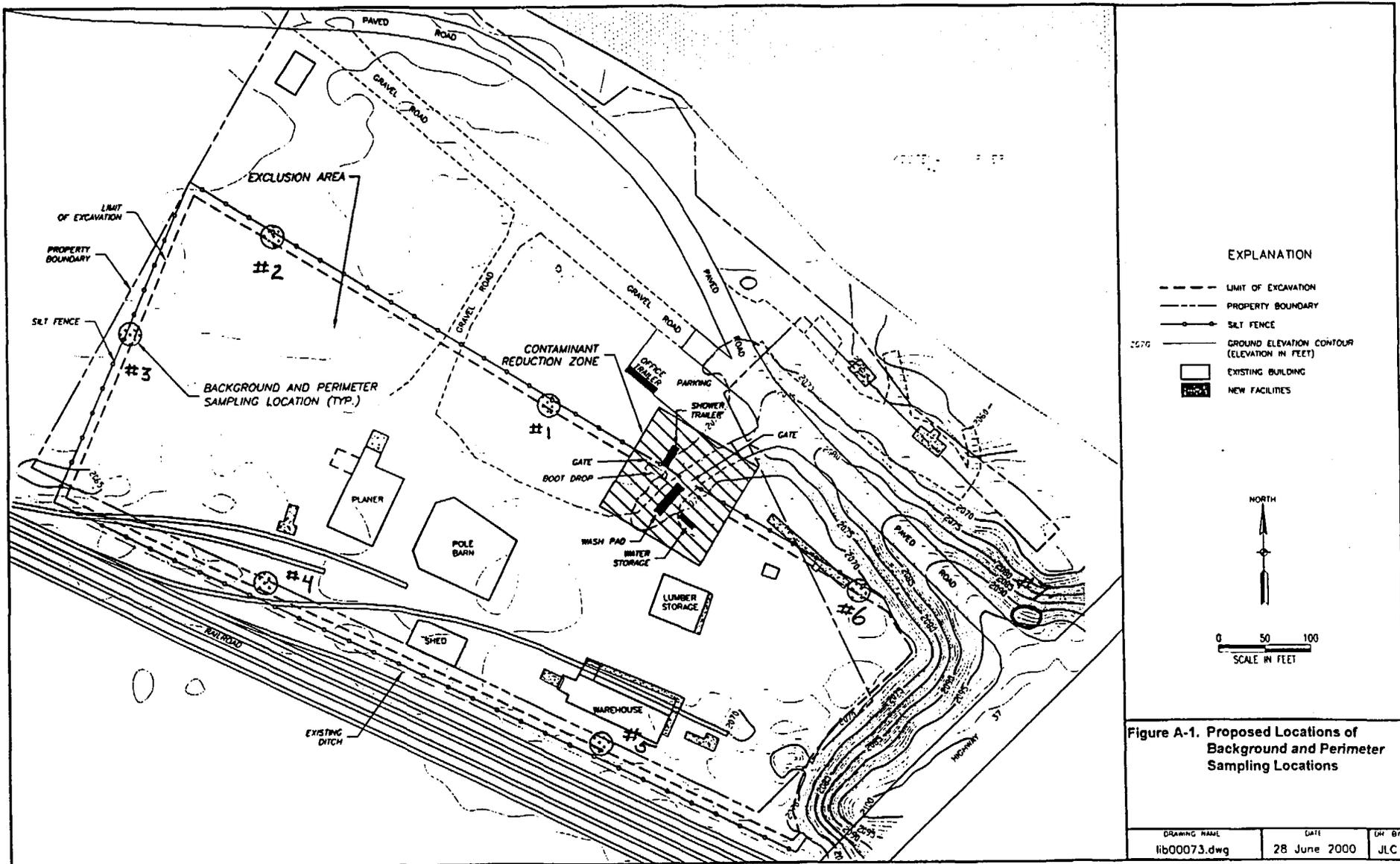


Figure A-1. Proposed Locations of Background and Perimeter Sampling Locations

DRAWING NAME lib00073.dwg	DATE 28 June 2000	DW BY JLC
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